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|--------|--------------|------------------------------------|----------|
| No. 23 | St. 12156 | 23 ^h 22 ^m ·6 | −56° 59' |
| 1894·9 | 320° ± 1'' ± | 8 and 10 | 2n. |
| No. 24 | St. 12192 | 23 ^h 27 ^m ·9 | −57° 35' |
| 1894·8 | 220° ± 2'' ± | 6·5 and 9 | 3n. |

This star is 90'' N. of another 6·5 mag. star.

| | | | |
|--------|-------------|-----------------------------------|------------|
| No. 25 | Anon. | 23 ^h 29 ^m ± | −58° 14' ± |
| 1894·9 | 50° ± 1'' ± | 7·8 and 7·8 | 1n. |

Near St. 12192 ; in the telescope field this is the preceding star of an elongated cross.

| | | | |
|--------|------------|-----------------------------------|--|
| No. 26 | St. 4019 | 7 ^h 54 ^m ·4 | −47° 37' |
| 1894·9 | 10° ± 71'' | 6 and 7 | One third of the way from R Puppis towards γ Argûs. |

Sydney, N.S.W. :
1894 December 10.

Note from author dated 1895 January 25.—"I find that No. 2 was measured by Mr. Sellors in 1891 (see *Ast. Nach.* No. 3154); also that Nos. 21 and 24 were observed on the meridian some years ago at Cordoba, and the *Comes* noted at the same time. Consequently these three stars are not new."

The Transit of Mercury, 1894 November 10. By Walter F. Gale.

The transit of *Mercury*, so far as it was visible in New South Wales, was well seen by eight observers in Sydney.

At the time of egress definition was noted by me as very good. My internal contact was probably early, but the more difficult external contact was recorded as exceptionally satisfactory. The following times were registered by counting the beats of the sidereal chronometer, which was previously and subsequently verified :

| | | |
|--|-----|---|
| Internal contact at egress, Nov. 10 | ... | ^h 9 ^m 11 ^s 30·8 G.M.T. |
| External " " " | ... | 9 13 23 " |
| My position is 10 ^h 4 ^m 54·79 E. −33° 53' 12"·3. | | |

Mercury appeared as an intensely black circular object, without fringe or detail of any kind. The umbra of a Sun-

spot, near which the planet passed, was decidedly less black than *Mercury*.

The instrument used was the 8½-inch equatorial reflector, aperture reduced to 5 inches and provided with a Sun diagonal and achromatic eyepiece magnifying 96 diameters.

Paddington, Sydney, N.S.W. :
1894 November 14.

The Transit of Mercury, 1894 November 11 ; Egress. By J. P. Thomson, F.R.S.G.S., &c., President of the Royal Geographical Society of Australasia, Brisbane.

(Communicated by the Secretaries.)

The instrument used to observe the transit of *Mercury* was an equatorially mounted refracting telescope, 6 feet focal length, with object-glass 6 inches in diameter, built by Sir Howard Grubb in 1884. It is the property of Mr. F. D. G. Stanley, F.R.I.B.A. The telescope rests on a hollow cast-iron column, 5 feet 9 inches in height, and 18 inches diameter at the base, in which is placed the driving clock. The whole metal work is mounted on a stone and concrete foundation carried down to the solid rock 6 feet below the surface of the ground, perfect freedom from vibration being thereby secured.

The observatory, which is situated at "Ardincraig," Toowong, the private residence of Mr. Stanley, is a wooden building, 12 feet square, with roof arranged so as to roll entirely off on a railway and framing built to receive it. There can be no doubt whatever that, in a fine climate, this arrangement possesses many advantages to which I shall refer later on. Included in the equipment of the observatory is a transit instrument, by Carl Bamberg, of Berlin (1879). This is placed upon a stone pedestal. The observations are taken through the hollow central axis of the instrument, the eyepiece being fitted with micrometer. A magnifying power of 100 diameters was used in the equatorial for the actual observation of the transit, this having been found, after repeated tests, to give the most perfect definition. The object-glass of the telescope was stopped down to 3 inches.

The party consisted of his Excellency General Sir Henry Wylie Norman, Governor of Queensland, Messrs. F. D. G. Stanley, and Arthur Cleminson, of the Surveyor-General's Staff, time recorders, and myself, who observed the transit. There were three chronometers used, namely :—No. 542, mean time, by Frodsham, in charge of his Excellency the Governor ; No. 2139, also mean time, by Arnold, in the hands of Mr. Stanley, and No. 4230, sidereal, by Kullberg, under the care of Mr. Cleminson. The first belongs to Mr. Stanley's observatory, but the others, one of which is the property of the Hon. A. C. Gregory, were